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DIGEST

Vision 2030 Saudi Arabia

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Welcome to the Driver Trett Digest

Hello and welcome to this the 18th edition of the Driver Trett Digest.

We have articles penned by our own consultants and guest authors that represent the entire lifespan of a construction project; that being from inception in the form of a highly ambitious development plan, through innovation in construction methods and changes to local laws into the less favourable final adjudication via formal dispute resolution and the impact of an insolvency of a contractor.

Whilst it is not the first article you will come to, I commend you to read “Pass it on” drafted by David Wileman. It reminded me of many things.

Firstly, that all our consultants started their working careers in industry whether as quantity surveyors, engineers of various disciplines, architects or whatever. In this respect they worked with firms that had the goal of completing a project according to the well recognised trinity of, on time, to the correct specification and with a profit.

Secondly, the value of good training in the basic skills, that we all perhaps take for granted, and to take those skills and enhance them throughout a career in what is an ever-changing world with new challenges to be faced and dealt with on a daily basis if the trinity is to be achieved. We should never underestimate the value of continuous development.

Our articles note new giga developments and changes in technology that will require management skills to be honed, contracts to be understood and operated if we are to avoid disputes. “Prevention is better than cure” encourages the proactive dispute avoidance. The articles go on to enlighten us in respect of some of the issues that may be faced when losing control of the decision-making process and deploying third party neutrals to determine entitlements including: issues with translating documents for Court Proceedings, challenging the decision of an Adjudicator, and the difficulties facing Arbitrators in having an open mind.

Enjoy your reading, I certainly did!

Paul Battrick
Managing Director International

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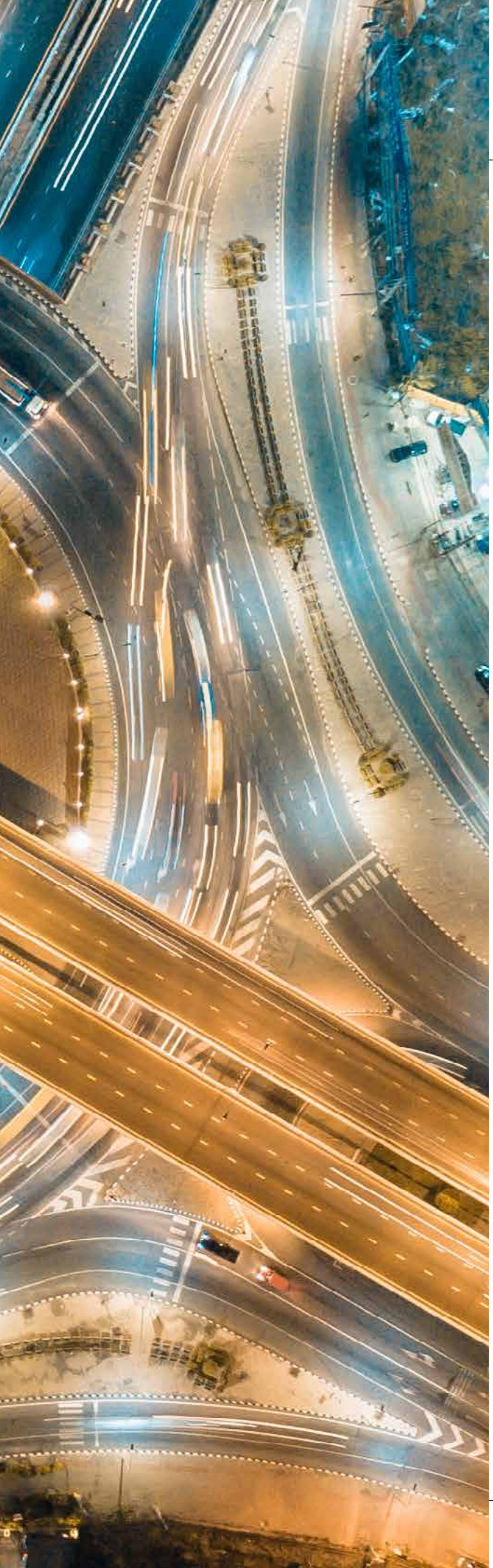

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The 'Giga-Projects' of Saudi Arabia

What are the challenges Saudi Arabia face in delivering some of the iconic giga-projects announced as part of the Vision 2030?

Stuart Baird
Driver Trett Middle East and Africa Regional Director

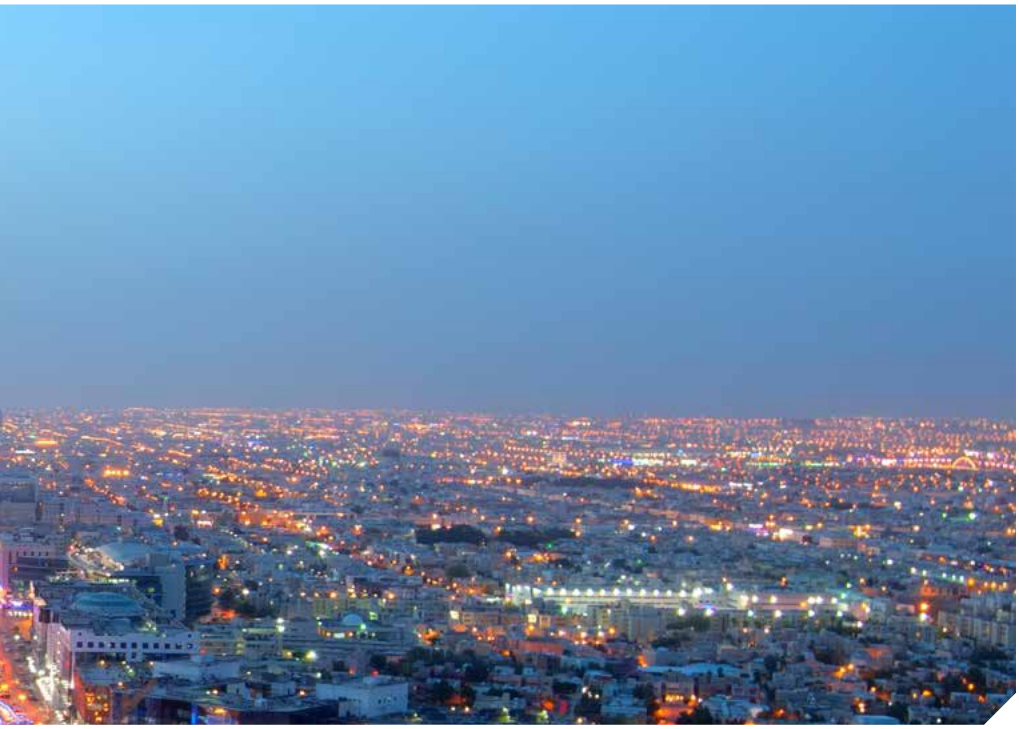
Saudi Vision 2030 was announced by Crown Prince Mohammed bin Salman in 2016 and seeks to transform Saudi Arabia, to diversify the largest economy in the Middle East away from its historic dependence on oil. The ambitious long-term development plan will aim to attract significant investment to the private sector, open up the economy and reduce bureaucracy to attract foreign direct investment.

At its core, the plan sets out the strategy to increase non-oil revenue to more than US$160bn by 2020 and US$266bn by 2030 from a baseline of US$43bn in 2015. The diversification efforts are expected to benefit key sectors such as tourism, transportation and logistics, high-value manufacturing, defence industry, renewable energy, and mining.

The development of these sectors will also include extensive construction of roads, railways, ports, airports, power plants, factories, mines, and supporting infrastructure. In January 2019, it was confirmed that Saudi Arabia will seek to attract US$429bn in private investment over a ten-year period to fund the infrastructure drive which will include five new airports and an extensive high-speed rail network.

Some of the iconic giga-projects announced as part of the Vision 2030 include NEOM Smart City, Red Sea Resort Project, Qiddiya Entertainment City and Amaala Red Sea Riviera:

- NEOM Smart City was announced in 2017 and is located on the Red Sea to the Northwest of Saudi Arabia bordering Egypt and Jordan. The development will cover a total area of 26,500km^2 and will stretch 460km along the Red Sea coast with a reported estimated construction cost of US$500bn. Construction work commenced in 2019 and the first phase is scheduled to be completed in 2020.
- The Red Sea Resort Project was also announced in 2017 and has been billed as one of the world's most ambitious tourism and hospitality developments located on the Red Sea. The project will be developed over 28,000km^2 and will consist of an archipelago of more than 90 unspoiled islands, inland resorts, marinas, luxury residential properties, recreation facilities and a commercial airport to serve the destination. The first phase of the project is scheduled for completion in 2022.
- Qiddiya Entertainment City is located 40km from Riyadh and will be a fully self-contained recreational and entertainment city that, when completed, is expected to be the world's largest entertainment city, surpassing Walt Disney World in Florida. The development will consist of 300 different entertainment and recreational facilities and is expected to contribute around US$4.7bn to the Kingdom's GDP by 2030 and provide 57,000 jobs for the local economy.
- The Amaala Red Sea Riviera will focus on ultra-luxury wellness tourism developed over



3,800km^2 and will consist of 2,500 hotel rooms, 200 retail establishments, an art gallery, marinas, 700 villas, and a dedicated commercial airport. The project was announced in 2018 with phase one expected to be completed in late 2020.

Despite the iconic nature of the giga-projects and the glamour associated with the well-publicised announcements, the actual execution and delivery of the giga-projects will come with significant challenges which Saudi Arabia has very recently experienced and continues to experience.

As an example, the King Abdullah Financial District (KAFD) in Riyadh commenced in 2006 and was originally due for completion in 2015. The development originally consisted of 59 high-rise towers with an overall built-up area of 5.3km^2 and an estimated construction cost of US$7.8bn. Fast forward four years and the project remains incomplete with the current construction cost estimates reported to be in the region of US$10bn, a cost overrun of US$2.2bn (28%).

Similarly, in 2014 construction of the Riyadh Metro commenced which consisted of a 176.7km six-line metro network with 85 state of the art stations and a development cost of US$22.5bn. Although the original completion date for the project was in 2018, it was announced in March of that year that due to project delays, the revised date for the Metro being fully operational would be 2021. The final development cost is yet unknown.

The delays and cost overrun experienced on the two giga-projects mentioned can be attributable to a variety of factors some which are, to a large degree, avoidable such as significant changes to scope and a failure to properly administer the contract. Other factors are however unavoidable such as the global financial crisis, or the prolonged and severe drop in oil prices which created a budget deficit in Saudi Arabia for six consecutive years between 2013 to 2019.

Although delays and cost overruns on major projects are not at all unique to Saudi Arabia, with the ambitious plans for the simultaneous development of a number of the pioneering giga-projects under the Saudi Vision 2030, this does present a unique set of circumstances and challenges for the Kingdom to manage effectively.

These challenges are further compounded when consideration is given to the existing giga-projects currently under construction including KAFD (US$10bn), Riyadh Metro (US$22.5bn), King Abdullah Economic City (US$100bn), Jeddah Tower (US$1.2bn), Haramain High Speed Railway (US$16bn), King Abdulaziz Airport Expansion (US$3.8bn), Grand Mosque – Holy Haram Mosque Expansion (US$21.3bn), Dahiyat Al Fursan New City (US$20bn) and Marjan & Berri Oil Field (US$18bn) to name a few!

There are however encouraging signs that Saudi Arabia is serious about addressing the issues of delay and cost overrun on its public projects. In 2015, the Government established The National Project Management, Operation and Maintenance Organisation (known as "Mashroat" or "NPMO") with a mandate to transform Government Ministries and Entities into efficient and effective project delivery organisations.

In 2017, the Government appointed a well-established international engineering, construction and project management company to support the implementation and operation of the Mashroat programme in order to effectively deliver the complex giga-projects, in line with the Saudi Vision 2030 plan.

Yamin Shihab, Vice President of MHPM_Driver in the Middle East, confirms the importance of Mashroat in the Saudi Arabian construction market. *"The KSA real estate and construction market was never to be underestimated, however a lack of transparency and governance in the award and management of Government contracts restricted international consultancies and contractors from investing in the Kingdom. Now, NPMO has provided a framework that allows consultants and contractors to clearly understand both the procurement and delivery methodology."*

Also, in August 2019, Saudi Arabia published the new Government Tenders & Procurement Law which will apply to all government projects from November 2019 and will replace the existing Law enacted in 2006 and currently used across all public projects in the Kingdom.

Some significant changes in the new Law include the introduction of arbitration as a method of resolving construction disputes with Government Ministries and Entities which was previously prohibited unless expressly agreed by the President of the Council of Ministers. This will allow both the Government Ministries and Entities and contracting entities to have more control over the dispute resolution process in the Kingdom including the ability to select experienced arbitrators with a high degree of technical expertise.

In addition, the new Law will now allow contractors to submit claims for additional compensation, to be heard and fully assessed during the execution period of a contract rather than after final handover of the works as per the existing Law.

These proposed changes alone represent a clear benefit to contractors who, based on our experience working in the Kingdom, have grown more and more frustrated with the rigid application of the existing Law on major projects, and the associated barriers that prevent an equitable assessment of entitlement to additional compensation in a timely manner and the generation of much needed cashflow.

Furthermore, the above changes will also bring significant benefit to the Government, including having more clarity about the actual cost to complete a project when a claim event has occurred, more productive relationships with contractors due to the early resolution of claims, and lower risk premiums in future tenders.

Although Saudi Arabia will continue to experience challenges relating to the planning and execution of its diverse portfolio of giga-projects over the next ten years, the steps it has made with the establishment of Mashroat and the new Government Tenders & Procurement Law will serve as the key building blocks towards the broad implementation of an international standard of project management across the Kingdom. ■

Lost in Translation

This article sheds some light on the common shortfalls in translated documents submitted to courts.

Ahmed Haridy
Senior Consultant
Driver Trett Kuwait

In November 2018 the Abu Dhabi government introduced new rules to its legislative system, with the intention to make Abu Dhabi an attractive destination for foreign investors. These rules provide a breakthrough to the translation quandary as they request plaintiffs in civil and commercial cases involving non-Arabic speaking defendants to translate all case files into English.

This is a unique and first step in the Middle East where Arabic is the official language. In all other countries or jurisdictions in the region all court proceedings are conducted in Arabic, and any document submitted to the court must be in Arabic, which often presents significant challenges to international companies operating in the region who are subject to litigation proceedings.

As a high number of construction contracts in the region involving international contractors, consultants, engineers etc. are administered in the English language, an issue arises when there is a dispute that the parties want to refer to the courts. All documents in English produced throughout the entire project period related to the dispute may need to be translated into the Arabic language, so they can be used in the court proceedings.

This mandatory requirement requires having each page of the case files translated, which could be a lengthy and expensive process if the case is hundreds of pages. The translation time and costs are not the only issues for the parties to manage. It is a requirement to clearly translate their respective positions in a foreign language which will allow them to effectively and accurately present their strongest case to the courts. In our experience, the parties typically carry out the translation of the case files and documents primarily through translation agencies in the region.

We typically work on cases presented to litigation, the majority of which were interpreted by translation agencies, and we frequently observe numerous flaws in those translated documents, mainly related to their structure and wording. This ultimately results in an inconsistent and incomprehensible document in which the parties' original intentions are lost in translation.

Many translating agencies rely on machine translation which has its pros and cons. Machine translation is free through readily available tools (Google Translate, Skype Translator, etc.), and it has a quick turnaround time. However, it has a very low level of accuracy and cannot translate context when it comes to technical, contractual, and legal documents. The level of accuracy required in this context calls for human linguistic experts with a high technical understanding of the proceedings.

A common flaw with machine translation is its limited capacity to differentiate between the forms of English language words, or to provide accurate technical terminology matching its original intent. For example, a common term in many construction contracts such as "provisional", when translated into Arabic language using websites with machine translation services, produces a translation with the meaning of "temporary".

Another more amusing example we continually come across is the translation of the contractual term "back to back contract", which when translated into the Arabic language using machine translation, produces a translation with the meaning of "the contract that moves backwards".

Finding the right linguistic and industry related expertise is a major challenge. Translators employed by translation agencies in the Arab region are not usually fully conversant with the construction or claims industry, hence providing a very poor and misrepresented translation.

Inexperienced translators will often fall into literal translation traps, by carrying out a word to word translation. Sometimes a sentence will have a direct translation in another language but the meaning will actually be different. This can happen with specific words and phrases where the literal translation means something else.

In a recent case, Driver Trett were appointed by an international contractor to perform the translation of court documents within a very short period of time, using our Arabic speaking consultants. Not only did we meet the fixed timeframe for the submission to the court, but we also managed to incorporate a high number of last-minute changes requested by the client, in an accurate and fluid manner.

Construction is one of the most difficult industries for translators to work in and it really does require the highest level of language professionals. Furthermore, when dealing with high value and complex claims, you also need a translator with the requisite level of technical related expertise, familiar with the contractual, quantum, and delay terminology used within the industry.

For an international contractor, developer, or consultant to ensure the best outcome in any court proceedings held across the region, before engaging a translator, it is vital to look for the following skills:

- Fluency in both the required languages
- Full acquaintance with the terminology used in the construction industry
- Capacity to convey the original meaning of the translated text as closely as possible
- Complete awareness of the specific contractual writing style in both languages
- Understanding of the intended use and purpose of the translated document

“Construction is one of the most difficult industries for translators to work in and it really does require the highest level of language professionals.”

Planning your translation ahead, rather than thinking of translation at the last stage, can save a considerable amount of time and money. This is especially productive when producing the original English documents in a way that keeps the intended meaning clear and making them easier to translate. This could be achieved by standardising the English language used and avoiding the use of unnecessarily sophisticated terminology that could cause complications with the translation at a later date.

Notwithstanding the above, clients tend to add more uncertainty and pressure to the translation process by frequently revising the content of their original statements, or moving the delivery deadlines forward. The undesirable impact of this can be minimised by working on translation as early as possible; this will help in producing documents that are primed for translation, and build a glossary of industry related terms. This will result in speeding up the process and reducing the costs of later changes.

In any kind of translation, especially in construction disputes, the most important thing to consider is the cost, or damage, caused by potential mistakes. Translating contractual, legal and many other kinds of content requires 100% accuracy to ensure the true positions of the parties to a dispute are clearly understood and interpreted correctly. ■

Driver Trett Riyadh

Driver Trett is delighted to announce the opening of its new office in Riyadh, Saudi Arabia which underpins our ongoing commitment to the region and strengthens our ability to provide local, premium construction services to our existing and future client base in the Kingdom.

The opening of the new office marks almost twenty years of successful operations for Driver Trett in Saudi Arabia and further expands on our capability to service the requirements of our clients across the Middle East from our existing offices in Abu Dhabi, Dubai, Oman, Kuwait, and Qatar.

Driver Trett recognises the importance of Saudi Arabia as a key market for the international construction industry due to the progressive leadership of the Government, the ambitious plans forming part of the Saudi Vision 2030, and the significant investment in all construction sectors across the country.

Driver Trett therefore believes that increasing our presence in the region, will ensure we are perfectly placed to manage the current and future demands of complex projects on behalf of government entities, developers, contractors and lead consultants.

Our permanent team based in the Kingdom will be supported by our international construction sector experts and will provide multi-disciplinary construction services including specialist commercial management, planning, programming and scheduling, and dispute resolution support services to the whole of Saudi Arabia including our existing project locations in Riyadh, Jeddah and Dammam.

For any enquiries, or to request further information, please contact Stuart Baird, Regional Operations Director for the Middle East on stuart.baird@drivertrett.com.

Pass it on

David Wileman talks about the importance of a mentor, effective training and how knowledge should be shared.

David Wileman
Operations Director
Driver Trett UK

I started my apprenticeship in 1985 in a major engineering power generation company. For the next few years I was put through a works class apprenticeship coupled with further education.

The first period was spent in an apprentice school (with 30 other people in that year's intake) learning the basics of milling, grinding, turning, sheet metal work, welding, burning, and so on. We then moved onto electrical works and instrumentation, learning how to make our very own car battery chargers and soldering irons, each day with a cap on my head. Throughout this year we were supervised by four first class engineers who were all coming to the end of their careers. Each one had a lifetime of knowledge of first class craftsmanship in a world renowned power company. What a start to working life.

The apprenticeship was backed up with a college education, day school, and night classes. The second and third year we were all sent out onto 'the shop floor' working with experienced people who had to ensure that their work was done whilst keeping a spotty 17 year old interested. This took me to strange places such as the pattern shop and the foundry. I worked in the machine shops and the non-destructive testing (NDT) department and then spent a considerable amount of time in the pipe shop. All completely different whilst at the same time exactly the same. Workers who had spent time as apprentices who had grown to become confident operatives in whatever field they entered. Without exception each one understood the need to be trained and the benefit it brought to them and the company for which they worked.

In the fourth year we migrated into a shirt and tie and took off our steel toe cap shoes. We found ourselves in the many different drawing offices, production offices and finally for me, the planning office. The planning office was full of planners who could take a look at a 2D drawing on a piece of paper and immediately understand timescales, prerequisites and the minutiae required to fabricate whatever was on the paper. Each day was 'a school day' learning on the job and being paid for the pleasure.

Then disaster. For international political reasons, that I will not go into, the company lost two massive orders. I had learnt so much at that company and I was desperate for it to continue. Whilst the axe of redundancy did not fall on my neck I made, which was heart breaking at the time, the decision to move into the emerging oil and gas market in Wallsend. Little did I know that the planning manager was as keen on training and personal development as I was to be trained. He ensured that he watched my development, checked my works and offered many an insight as to how I could develop my skills and become a better planner.

You may ask why I am taking you on a wander down my memory lane. Thankfully it is not because I am harking after better days but rather I feel that in some little way I have stepped into the shoes of the chaps in the apprentice school. At Driver Trett, the senior management team have decided to start an in-house training programme named 'Minerva'. Simply put, over the last three years Driver Trett have taken a proactive approach to recruiting and developing junior members of staff and I have been part of that process.

'Minerva' is a structured training programme

> **Being a mentor has allowed me to pass on the better parts of my 30 plus years of experience and in some little way I feel that I am repaying all the 'educators' with whom I have had the joy to learn from.**

which has been developed and implemented by the senior management team where the candidates undertake several training programmes, including an additional relevant post-graduate qualification, with the support of a mentor. Being a mentor has allowed me to pass on the better parts of my 30 plus years of experience and in some little way I feel that I am repaying all the 'educators' with whom I have had the joy to learn from. Knowledge... pass it on! ■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Global Claims: An Introduction

A look at global claims, how they are viewed by the courts and how they might be avoided.

Adrian Dobbie-Holman
Associate Director
Driver Trett Dubai

In the past three years, I have reviewed four claims for companies who had all spent a vast amount more on labour than they planned to, ostensibly due to multiple and prolonged delay and disruption events.

Each of the claims that were produced were a type of total cost global claim, and whilst a considerable amount of thought, effort and supporting documentation went into their production, the success of such claims is by no means guaranteed and there are many pitfalls to be aware of.

There is no single agreed definition of global claims, but the term 'global' essentially means that the explanation of the link between cause and effect is inadequate or absent. Global claims are usually founded on several separate matters or events. A total cost claim is a type of global claim where entitlement is quantified by simply deducting the planned cost from the actual cost incurred.

In the last 40 years or so, the following six main guidelines have arisen from UK (common law) court cases dealing with global claims:

Six main guidelines

1. The claim must be sufficiently detailed to enable the recipient to know what case it has to meet;
2. Generally, all contractual conditions (such as notices and interim particulars) must have been complied with;
3. The claim must exclude any significant matters for which the defendant is not responsible;
4. The claimant must demonstrate that it is impossible or impractical to separate out the consequences of each of the events being grouped together, if applicable;
5. Any part of the claim capable of separation should not form part of the claim;
6. The claimant must provide sufficient evidence to support the losses claimed.

Attitudes towards global or total cost claims have changed over the years and there are many examples of these claims generating emotive language from those involved, more so than one might expect from the more usual claims for prolongation, or valuation disputes.

Evolution of approach

From being accepted only in "extraordinary circumstances"[1] a degree of acceptance of global claims arose in 1967 in Crosby,[2] where it was accepted that cumulative delay and disruption caused by separate events made it impractical or impossible to separate cause and effect.

However, in 1991 in Wharf,[3] a Hong Kong case in which a very strict approach was taken, a claim was struck out as it failed to explain the link between the breaches and the amounts claimed. In this case, the global nature of the claim was said to be “embarrassing” and “prejudicial”. A year later another key UK case noted that global claims were reputed to be exaggerated.[4]

In 2003, Pickavance, in his capacity as an arbitrator, opined that global claims were made when “the contractor simply does not have a case”[5] however shortly thereafter a more pragmatic approach to global claims was taken in John Doyle, in which it was stated that if a claim fails in whole, the loss can be apportioned according to the events for which the defendant was found to be liable for.[6]

Within the last decade, in Walter Lilly,[7] it was stated that causation must be proved on a balance of probabilities, not absolutely.

So, it appears that the strict approach to global claims has become slightly more relaxed

and global claims are now less likely to be struck out, in favour of requesting amendments or further particulars. In addition to the desire for the expeditious and efficient determination of disputes that is sought,[8] one factor in this approach might be that dismissing global claims might be inequitable in that respondents who cause or are liable for multiple events could end up in a better position than respondents who cause or are liable for one or very few such events.

Pros and Cons

The advantage of global claims is that they are relatively inexpensive and quick to formulate. However, I state "the advantage" deliberately as it is difficult to see any other advantage, despite the apparent benefit of the pragmatic view that might be taken in a common law dispute resolution process.

Conversely, there are numerous disadvantages. Often overlooked contractual preconditions must be met. With the weight of the poor reputation of global claims behind them, defendants will seek to highlight the global nature of such a claim and emphasise this point strongly even if considerable effort has been put into the separation of cause and effect where possible. They may also claim that the contemporaneous records are poor and insufficient and that further particulars are required. Another consideration is that in some circumstances a global claim might be seen to convert a priced contract into a cost-reimbursable one.

Labour and the Measured Mile

Global claims are commonly used to claim additional labour costs where labour productivity has been adversely impacted by numerous delay and disruption events. One recognised method of demonstrating the impact is called the "Measured Mile" method whereby productivity on an undisrupted portion of the work is measured and used to show that (1) without disruption, a certain level of productivity could be achieved and (2) what the total labour cost would have been if that productivity had been achieved.

At a RICS seminar that I attended a few years ago the senior commercial manager of a large contractor from Saudi Arabia asked "if you are not recording labour productivity, then what are you doing?". A fair question, and one that should be considered carefully as in most cases that I have been involved in, productivity was not recorded, and when it was, the efforts to do so were inconsistent and in response to disruption, as opposed to a pro-active measure that one would expect to be a standard part of commercial monitoring, and one that could give an early warning of disruption.

How to avoid global claims

So, what can be done to avoid having to present global claims, or at the very least be in a position to satisfy all the requirements to maximise the chances of success?

Firstly, the easiest of all, administer the contract properly and issue all required claim notices, particulars and any other stipulations. Keep complete, accurate and consistent daily reports of plant and labour resources and production, but do not assume that daily reports can easily be turned into productivity analysis. On a road bridge project that I worked on, what appeared to be good quality daily reports proved to be useless in an attempted productivity analysis as there were numerous instances of missing labour data and locational information. Determining productivity rates along particular bridge sections was impossible. If there is an undisrupted portion of the work, productivity on that portion could become the "measured mile" baseline and poor productivity here will dent any later disruption claim, particularly if the contract includes planned productivity rates that were never achieved.

If a claim is appropriate, the guidelines mentioned above must be considered with respect to contractual entitlement or culpability for each event, demonstrating the impossibility or impracticality of separation; separation where possible and the respondent's entitlement to know what case it must answer. Finally, carry out a "sanity check". This may be as simple as a rule of thumb calculation showing that the figures used in your claim are within reason.

In my experience, global claims are generally made when a multitude of delay and disruption events have occurred and where additional costs have genuinely been incurred as a result. Considerable time and effort is spent to produce detailed and sometimes voluminous claims, however the complexity of the interaction of the multiple causes and effects, inadequacies in the contemporary records and the absence of productivity records all combine to make succeeding with a global claim a significant challenge. ■

[1] *R. Clay and N. Dennys, Hudson's Building and Engineering Contracts (13th edn, Sweet & Maxwell, 2018) 6-076*

[2] *J. Crosby & Sons Ltd. v Portland UDC [1967] 5 BLR 121*

[3] *Wharf Properties v Eric Cumine Associates (1991) 52 B.L.R. 8*

[4] *McAlpine Humberoak Ltd v McDermott International Inc (1992) 58 B.L.R. 1 CA*

[5] *Keith Pickavance, Extensions of Time – An Arbitrator's Perspective (ICLR, 2003)*

[6] *John Doyle v Laing Management (Scotland) Ltd [2004] B.L.R. 295*

[7] *Walter Lilly v Mackay (2012) EWHC 1773 (TCC); [2012] B.L.R. 503*

[8] *GAB Robins v Specialist Computer Centres Ltd [1998] EWCA Civ 924*

The Future of Tunnelling

In this article Professor Colin Eddie looks at the past, present, and future of tunnelling.

Professor Colin Eddie
Technical Expert
Diales

What's the Bigger Picture?

Our planet is changing more rapidly than at any other time in human history. It took 200,000 years of human evolution to get to a population of 1bn by the 1800s; in the 200 years since we have seen a seven-fold increase, with the population expected to rise to 10bn by 2050 (Figure 1). Associated with this population growth is explosive urbanisation: in 1800, 3% of the world's population lived in urban environments and by 2050, 70% of us will be city dwellers. Mega-cities are defined at conurbations of more than 10m people. In 1950 there was only one (New York) and today we are approaching 50, both in industrialised and in developing countries.

In 2015, the United Nations published its 17 Sustainable Developments Goals (SDGs), to address the global challenges we face, including those related to poverty, inequality, climate, environmental degradation, prosperity, and peace and justice (Figure 2).

As a civil engineer and tunneller, my eye is drawn in particular towards:

Goal 6 – Ensure availability and sustainable management of water and sanitation for all. The majority of the world's population still lacks safe sanitation and 3 in 10 lack access to safe drinking water.

Goal 9 – Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.

Goal 11 – Make cities and human settlements inclusive, safe, resilient and sustainable.

In 2018 the UN Published its progress report. The UN Habitat Executive Director stated "Cities are the spaces where all the SDGs can be integrated to provide holistic solutions to the challenges of poverty, exclusion, climate change and risks".

Where are we today?

Associated with explosive urbanisation, we are seeing cities with inadequate shelter, insufficient infrastructure and services, overcrowded transportation systems, inadequate water supply and sanitation, increasing pollution and increasing consequences from natural disasters.

This all means one thing: we are rapidly running out of space and this is fuelling an insatiable appetite to utilise the space beneath our feet. The tunnelling and underground space sector is currently estimated to be worth US$100bn per annum and at 7% growth per year is one of the fastest growing sectors of the construction industry.

Today however the cost of tunnelling, particularly on major projects is much higher than it needs to be in many parts of the world and perversely often in those countries with the most "mature" construction industries.

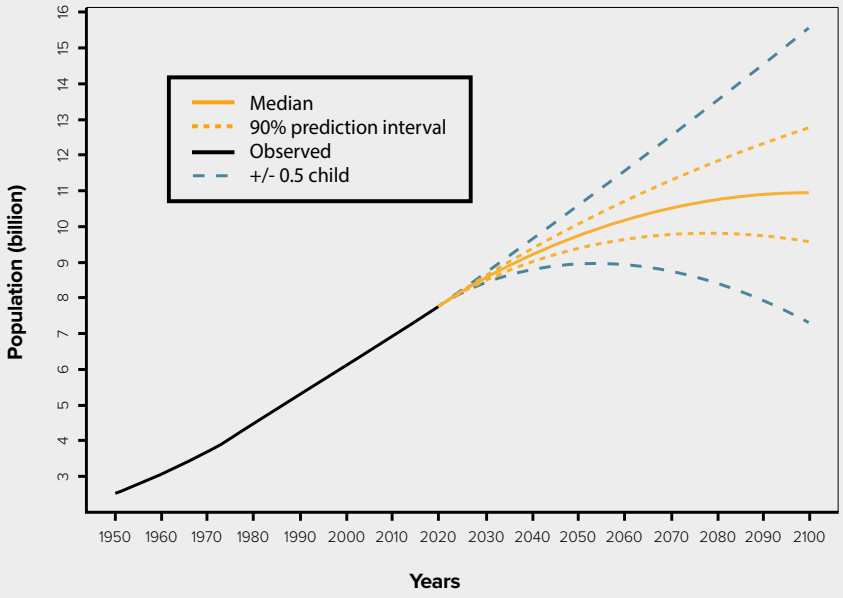
In recent years we have seen major tunnelling projects suffer significant and unnecessary cost over-runs due to poor procurement choices compounded by poor contract administration.

Tunnelling projects are often procured using an incomplete reference design which is then to be developed by a design and construct entity. All too often however, tensions exist in this procurement process between the reference design, planning conditions, the Client's unnecessary technical specifications and the functional requirements for the project. Couple this with excessive red tape, multiple tiers of management, a lack of a controlling mind and excessive man marking, and we have the perfect storm. FIDIC has responded to the tunnelling market and recently introduced its Emerald Book; a contract it considers to be balanced in terms of risk allocation. Let us hope so.

In many countries (including the UK) planning of underground space is extremely poor or even non-existent. No effective space reservation

Figure 1

Current and predicted trends for global population growth (source: UN)



Tunnel Boring Machine

policies exist, and no single body is responsible for the coordination of underground space. Space is therefore allocated on a first come first served basis with no coordinated plan for the future. In cities such as London this will inevitably mean that future tunnels will be driven at ever increasing depths.

Despite significant improvements in tunnelling technology in recent years we are still essentially scratching at the ground with tools that all too quickly wear out and then invariably supporting the ground with conventional concrete made from Portland Cement (one of the least sustainable construction materials, which is currently responsible for about 8% of the yearly global CO_2 emissions).

New thinking is desperately required. The efficient and sustainable development of underground space is imperative if we are to maintain or even arrest the decline of the quality of the lives of our urban populations. In Elon Musk's inimitable fashion, he recently challenged the world's tunnellers to reduce the cost of tunnelling by 90%. A headline grabbing soundbite no doubt, but actually a more legitimate aspiration than you must at first think. If we are able to implement emerging technologies together within more effective contractual frameworks, a big bite could be taken out of this 90%. If we sprinkle over the top, effective and pro-active risk management strategies, then confidence in the out-turn delivery will also be greatly enhanced thereby improving much needed public and investor confidence in the future.

Emerging Technologies

New and innovative technologies will bring about a paradigm shift in tunnelling in the near future. Today many tunnels are constructed using tunnel boring machines (TBMs).

These impressive machines are armed at the face with picks or discs and these wear as they excavate the ground. Delays associated with change of these cutters are often expensive and sometimes hazardous. Contactless excavation techniques would reduce or even eliminate wear and greatly enhance production rates and research is currently underway to bring this concept to market.

In tunnelling the adage that "time is money" is extremely apposite. Continuous excavation techniques utilising extruded linings would greatly increase the speed of construction and reduce costs significantly. The extruded lining method has been used off and on for nearly 40 years but with limited success due to the use of conventional concrete and steel bar reinforcement. New materials have already been developed that have been engineered at a nanoscale to deliver unbelievable performance when compared with conventional construction materials. These materials would be ideal for extrusion and as they are also self-healing and ultra-ductile would deliver exceptional performance and longevity.

Future Tunnelling and Underground Space Applications

A number of exciting new applications for underground space will soon be making a major impact on communities around the globe. We shall explore a couple of these.

High-Speed Travel

Travelling at high speed through the air at atmospheric pressure is highly energy inefficient. Drag is proportional to the cube of the speed and this explains why supercars have needed to double their horsepower to achieve top end speed increases of only a few kilometres per

hour. At 400km/h the air feels like butter and very difficult to persuade to move out of the way.

Most of us would have heard of Hyperloop or similar such systems. The concept is to travel at high speed (up to say 800km/h) through a tube which has had most of its air sucked out to create a vacuum. Hyperloop is normally portrayed in an above ground tube, but the concept would work equally well underground particularly on routes between congested cities. Over 20 years ago, scientists in Switzerland developed the Swiss Metro Concept. The concept was to utilise trains engineered to aircraft standard and run these in evacuated tunnels. The concept was to join each of the major cities in Switzerland and have commuting times measured in minutes rather than hours.

Using linear induction motors, the trains would effectively levitate and in the evacuated tubes would be virtually frictionless. As acceleration and deceleration rates would need to be limited for passenger comfort, the concept does need to be of sufficient length to be viable (i.e. you need a long enough length running at high speed to deliver the maximum benefit).

Freight Transport System

The conveyance of freight underground is an obvious and cost-effective solution to the problems of increasing congestion on our cities' roads, increasing pollution of the atmosphere and the alarming rise in the fatality of cyclists. A high proportion of the goods transported on the roads around the world is conveyed on pallets. These pallets could easily be conveyed underground on autonomous smart pods powered with linear induction motors. Logistics centres on the outskirts of major conurbations would be used to facilitate just in time delivery via small diameter tunnels to underground distribution centres in the city centre. Tertiary delivery could be via a secondary capsule system, or more likely on the surface using electric vehicles.

Figure 2 - UN Sustainable Development Goals

A variant of this system will be used to convey 20ft and 40ft shipping containers from busy ports. Many cities around the globe suffer from the same challenge. Ports were often established hundreds or even thousands of years ago, with cities then growing around the port. Moving goods from these city ports often creates conflict and congestion on the existing road network.

Existing technologies have been developed to solve these challenges and it is becoming increasingly clear that the business case for such facilities is extremely compelling. Couple this with the sustainability, environmental and safety benefits these systems will bring and you must conclude that it is a question of when - not if - these systems will be built.

The Way Forward

New machines, materials and applications will radically change how we think about investing in underground infrastructure. These big ideas however need to be promoted by strong and determined champions who can win the confidence of investors, the public and politicians. I am sure that if visionary engineers such as Isambard Kingdom Brunel were alive today, we would already be benefitting from this revolution. ■

Prevention is better than cure...

…and that is particularly relevant for disputes which arise in the construction industry.

Kirsteen Cacchioli
Technical Director
Driver Trett UK

The time, cost and pain involved in resolving disputes (whether on complex multi-billion pound international projects, or smaller domestic contracts) is draining and damaging, both in terms of internal resources and external relationships.

As a result, we are increasingly finding that clients are trying to avoid unnecessary costs and time involved in dispute resolution; primarily by taking steps earlier in the project life-cycle to better understand potential risks and common pitfalls, to train their teams to be aware of their obligations under the contract (whether in terms of time, cost or quality) and to be more proactive in managing potential disputes as they emerge, rather than kicking the can down the road and hoping for the best.

There are many ways to try and avoid disputes arising on a project (or to better manage them if they do arise), none more so than reviewing and understanding the contract, and building the project team's awareness of their obligations under that contract at the outset.

It is still so commonplace for the contract to be left in the bottom drawer, or for the team to simply not understand the implications of the contract they are working to, or the terminology which sets out their obligations under the contract. A detailed contract review can therefore be hugely helpful, particularly if it is followed up with an interactive, open-forum, team workshop. This encourages discussion between the team, the sharing of problems and experiences and the identification of key areas for risk management and commercial improvement. The administrative requirements associated with all contracts (not just the NEC) are such that a failure to comply with particular obligations can be fatal to entitlement, with missed opportunities to be 'on the front foot' in commercial discussions and negotiations.

Establishing simple procedural checklists at the outset can be of enormous benefit to the project team, identifying which notices need to be issued when (by both parties), and whether there are any unique (or particularly important) requirements under the contract which need to be highlighted for compliance. Reference to a carefully (but simply) drafted schedule of notifications and records helps to focus the project team during the cut and thrust of the day to day delivery of a project.

Reviewing, validating and stress-testing the baseline programme is another area which can provide long-term benefits for the project. An understanding of the practical implications of the baseline programme at the outset, whether it is achievable and whether there are any potential constraints on its timely delivery, are all essential ingredients in managing the programme for the duration of the project. Good programme management is now an essential component of any project (and is more often than not a contractual obligation), and provides a benchmark for entitlements to extensions of time, adjustments of the contract sum and loss and expense recovery amongst others. The team's ability to understand and handle this important tool is crucial.

Detailed project monitoring and careful progress reporting is another area which can prove invaluable in alerting the team to potential problem areas before they become too established or have a disproportionate effect on the progress and costs of the project. An objective overview of the progress of the works, backed up with clearly labelled and catalogued photographs and other site records, works as both a proactive management tool and a reliable resource for retrospective analysis (whether for cost or time).

The same can be said of records. Not only are they often a contractual requirement, but accurate, detailed, and easily accessible records really can make or break a dispute, whether in providing support to continuing project-level discussions to avoid disputes developing (or expanding), in senior level negotiations, or formal dispute proceedings. A good record management system is essential, as is the team's buy-in to the efficient management of disputes.

Dialogue and exchange of information are vital to the avoidance of further disputes. So keep talking! Constructive dialogue between the parties keeps the prospect of satisfactory commercial settlements alive, thereby avoiding the uncertainty that comes when you place decisions for your dispute in someone else's hands. ■

Severing the good from the bad and the ugly

Willow Corp S.A.R.L and MTD Contractors Limited [2019] EWHC 1591 (TCC) and the ability to sever an adjudicator's decision.

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Introduction

Challenging an adjudicator's decision is no mean feat. Over 20 years after the introduction of adjudication there are still only limited ways in which the paying party can resist court enforcement of an adjudicator's decision, namely:

1 By persuading the Court that the adjudicator had no jurisdiction to make the decision she did;
2 That there was a serious breach of the rules of natural justice;
3 In some insolvency situations;
4 Where fraud can be demonstrated.

Even where an adjudicator's decision is merely erroneous, or irrational, or eccentric, the courts will generally refuse to interfere. Adjudication is an interim remedy, designed to facilitate cashflow, and not designed to provide a final determination of the parties' rights. But the "pay now, argue later" ethos of adjudication may lead to injustices, and the courts are now becoming more active in finding subtle ways to mitigate the previous robustness of their approach.

Severance

Whether it is possible to sever the decision of an adjudicator has been discussed for a number of years in the specialist construction press, in construction textbooks and has been addressed in obiter remarks in a number of judgements. Can it be done? If the adjudicator acts without jurisdiction, does that taint the whole of their decision, or can parts of it remain viable? If a decision is to be severed, how would it be done and when could it be done? What will happen to the good, the bad and the ugly parts of the decision?

We now have answers to some of these questions in the judgement of Pepperall J in Willow Corp S.A.R.L and MTD Contractors Limited [2019] EWHC 1591 (TCC).

Facts

Willow Corp S.A.R.L ("Willow") had engaged MTD Contractors Limited ("MTD") to design and build a hotel for a contract price of £33.5m. Following delays to the project, the parties entered into an agreement which provided for a revised date for Practical Completion of 28 July 2017 "with an agreed list of outstanding work". By 28 July, the works were incomplete and Willow's Agent, GVA Second London Wall Project Management Limited ("GVA") declined to certify Practical Completion. A dispute arose between the parties and the dispute was referred to adjudication, the dispute being over the balance of payments due under the building contract.

Willow argued that Practical Completion had not been achieved by the agreed revised date, this meant that liquidated damages ("LADs") were payable by MTD in the sum of £715k and had to be accounted for when considering the balance due under the building contract.

However, the adjudicator disagreed, deciding that on proper construction of the June agreement, GVA was required to certify Practical Completion provided that there was an agreed list of outstanding works (which there was). As Practical Completion had been achieved, Willow was not entitled to claim LADs. The adjudicator ordered that Willow should pay MTD £1,174,854.92 plus VAT in respect of amounts due under the contract.

Willow refused to pay the award and issued Part 8 proceedings claiming declaratory relief from the Technology & Construction Court (TCC), asking the court to hold that the adjudicator's decision was unenforceable. It asked the court to decide:

- What was the true construction of the June agreement;
- That practical completion had not been achieved by 28 July 2017;
- That the rejection of the LADs claim was "legally unenforceable" as the adjudicator's interpretation of the contract was flawed; and
- In any event, the adjudication was unenforceable due to breaches of natural justice.

MTD also sought to enforce the adjudicator's award applying for summary judgement via Part 7 proceedings. Both claims were heard together before Mr Justice Pepperall in the Technology and Construction Court.

Decision

In relation to the first three declarations, Pepperall J concluded that upon its true construction, the June agreement did not require Willow to accept that Practical Completion had been achieved simply upon agreement of a list of outstanding works. The adjudicator had incorrectly construed the agreement and dismissal of Willow's right to LADs was an error of law.

However, Pepperall J dismissed Willow's breach of natural justice claim, holding that "these are...no more than complaints about the rough and tumble inherent in" adjudication.

Willow therefore succeeded in their submissions as to the construction of the agreement, the effect of which was to entitle them to set off the LADs against the contract sum, but failed to convince Pepperall J of a breach of natural justice, the effect of which was to entitle MTD to the balance of its claim for the contract sum. The question arose as to whether the court could order severance of the adjudicator's decision and separate the good parts of the decision from the bad.

The judge held that the question to determine was whether there is anything left that can be safely enforced once the flaw in the adjudication decision is disregarded. He commented that the TCC should be "rather more willing to sever adjudicator's decisions where one can clearly identify a core nucleus of the decision that can safely be enforced". He held that the adjudicator's error on Practical Completion did not infect the balance of the decision and so it was enforced.

In doing so he built upon previous authorities of Quartzelec Ltd v Honeywell Control Systems Ltd [2008] EWHC 3315 and Lidl UK GmbH v RG Carter Colchester Ltd [2012] EWHC 3138 (TCC) which showed the Court developing a more flexible and pragmatic view of severance in the right circumstances.

That this is the first case where severance has been held to be appropriate suggests that it will be of limited application and will only be useful in certain circumstances. But it is still a useful weapon to have in the armoury, particularly if, as in this case, significant sums of money depend upon it. ■

Careful what you write:

The impact of issue conflicts in International Commercial Arbitration.

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It seems as though arbitrators are starting to learn a lesson that expert witnesses in international arbitration have known for some time: be careful what you write. Historically, when referring to an arbitrator's potential lack of independence or impartiality, one usually thought in terms of the arbitrator's relationship with the parties, either personal or professional rather than a relationship to the subject matter of the dispute. However, an arbitrator's views and thoughts as codified in published papers, articles, blogs, interviews or advocacy on an issue that is at the heart of the dispute can also raise justifiable doubts about the arbitrator's ability to approach the dispute with an open mind and without unconscious bias.
The line between an arbitrator's knowledge

and familiarity with a particular issue (perceived to be desirable in sector-specific international commercial arbitration) and an arbitrator with, for practical purposes, a "closed mind" on a particular point of law is fine. One commentator has illustrated the dilemma that arises in the following terms:

On the one hand, experience in international public or private law is a threshold qualification for international adjudicators (whether they are selected by an international institution or the parties), but on the other hand, the fundamental unfairness is obvious when a party is faced with an adjudicator who has closed her mind on important issues in dispute.[1]

The term "issue conflict" refers to an arbitrator's relationship with the subject matter(s) of the dispute which results in actual or apparent bias:

An "issue conflict" in arbitration describes the existence of actual or apparent bias on the part of the arbitrator stemming from his or her previously expressed views on a question that goes to the very outcome of the case to be decided. It denotes the arbitrator's relationship to the subject matter of the dispute, and his or her perceived capacity to adjudicate with an open mind.[2]

Although guidance on independence and impartiality with respect to an arbitrator's relationships with the parties or their counsel exists extensively, the same is not true with respect to an arbitrator's relationship with the subject matter of the dispute. Many arbitral institutions do not adequately address the topic: for example, the LCIA, SCC, ICSID, and CIArb leave this issue unsettled and appear to defer to 'soft law', the common-law and/or lex arbitri. As a result, the users of international arbitration, in particular lay clients, are left with unsatisfactory ambiguities or a "sense of unease" with respect to an arbitrator's independence and impartiality resulting from this relationship to an issue in dispute.

The 2014 IBA Guidelines, which are widely referenced "soft law" with respect to assessing conflicts of interest, have sought to codify (on the so-called "traffic light" system) potential conflicts of interest. With respect to issue conflicts, the IBA Guidelines contemplate three "issue-conflict" situations in the Lists:

- Article 4.1.1 (Green List): "The arbitrator has previously expressed a legal opinion (such as in a law review article or public lecture) concerning an issue that also arises in the arbitration (but this opinion is not focused on the case)."
- Article 3.1.5 (Orange List): "The arbitrator currently serves, or has served within the past three years, as arbitrator in another arbitration on a related issue involving one of the parties, or an affiliate of one of the parties."
- Article 3.5.2 (Orange List): "The arbitrator has publicly advocated a position on the case, whether in a published paper, or speech, or otherwise" (emphasis added).

However, some have criticised that the IBA Guidelines favor simplicity and memorability over rigorous analysis thereby "over-simplifying" certain species of conflicts of interest, issue conflicts. Practically speaking, the issue conflict over-simplification has arguably allowed practitioners, arbitrators and institutions to avoid pro-active disclosure of a potential issue conflict by analogising to a situation falling under one of the traffic light categories (in particular the Green List classification of previous academic writings). That trend is changing.

It appears to be settled from the "jurisprudence" on the subject, mostly in terms of published investment arbitration awards, that a small number of academic publications on fleeting topics – without other circumstances – is unlikely to give rise to justifiable doubts about an arbitrator's independence or impartiality. However, the same would not (and perhaps should not) be true when the writings in question evidence a deeply held view refined and strengthened over many years' worth of writings.

When considering an arbitrator's past publications, the fundamental question underlying concerns about issue conflicts remains: how does one distinguish between unobjectionable forms of predisposition and those triggering reasonable concerns about the lack of an open mind and bias? To be clear: this is not simply an issue plaguing arbitral institutions. The Court of Appeal in Halliburton Company v Chubb Bermuda Insurance Ltd & Ors has also grappled with this fundamental question and found that the relevant experience of an arbitrator is material to the risk of unconscious bias. The UK Supreme Court will be called upon shortly (later this year) to grapple with this question.

There remain differing views with respect to previous writings and the impact they may have on an arbitrator's independence impartiality. Some commentators have attempted to draw a distinction between writing about legal issues and deciding cases as an arbitrator:

it can also be said that it is different to write a legal article or research piece about what one believes the law should be, than to approach a case as an arbitrator that should apply existing law as it is, rather than as what it should be.[3]

As the panel in Urbaser stated: *"One of the main qualities of an academic is the ability to change his/her opinion as required in light of the current state of academic knowledge".*[4]

These comments have a logical pragmatism – for example, just because an arbitrator thought one way about a particular legal doctrine in the past does not mean they cannot now approach the same doctrine with an open mind. There are, however, complex factual questions in parsing between an innocuous academic or legal paper and "achieving academic recognition" on a particular subject through the articulation and publication of particular views. The practical difficulty often faced in arbitration is the lack of disclosure from the arbitrators

The line between an arbitrator's knowledge and familiarity with a particular issue ... and an arbitrator with, for practical purposes, a "closed mind" on a particular point of law is fine.

(who having read the Notice for Arbitration and the Response are in a privileged and best position to know how many relevant academic papers or Awards have been written). In such circumstances, it seems unfair for the institutions and disqualifying bodies to place the higher burden on parties making a challenge and a low or no burden on arbitrators. Enhanced and pro-active disclosure from arbitrators would be one solution – but will institutions require it?

This article started with the premise that arbitrators are just now learning a lesson that expert witnesses in international arbitration have known for some time. In particular, expert witnesses are well aware that their previous writings can be used by an opposing party in an arbitration (in cross examination or argument) to draw a picture of an expert who is biased in favor of a party or a particular view, has in other cases expressed views which are contradictory to the views it is proposing in the current case, or that previous writings otherwise undermine the expert or its positions in the arbitration. It is curious that such a system exists to shed light on potential areas of bias (or conflicts of interest) for participants in an arbitration, but does not exist for the ultimate decision makers in international arbitration. ■

[1] *Joseph R. Brubaker, The Judge Who Knew Too Much: Issue Conflicts in International Adjudication, Berkeley Journal of International Law, Volume 26 Issue 1 Article 3 (2008).*

[2] *Anthony Sinclair and Matthew Gearing, Partiality and Issue Conflicts, Transnational Dispute Management, Vol. 5, Issue 4 (July 2008).*

[3] *Hernando Diaz-Candia, "Issue Conflict" in Arbitration as apparently [un]seen in 2011 by a U.S. Court in STMicroelectronics vs. Credit Suisse Securities, Arbitraje: Revista de Arbitraje Comercial y de Inversiones, Centro Internacional de Negociacion CIAMEN), IproLex 2012, Volume 5 Issue 1, p. 288.*

[4] *Urbaser S.A. v. Argentine Republic, ICSID Case No. ARB/07/26, 12 August 2010, at para. 51.*

Prompt Payment and Adjudication in Canada

Is the new legislation really needed and how do we prepare?

Kevin O'Neill
Operations Director
Driver Trett Canada

Is there really a need for legislation imposing prompt payment measures and interim adjudication on construction contracts in Alberta (and by extension, Canada)? That was a question posed to me (rhetorically) at a recent panel discussion. Aren't the parties to a construction contract free to contract with each other, and to abide by the conditions of the contract? Haven't both parties agreed that the determinations made by the consultant (architect, engineer, contract administrator, payment certifier, as the case may be) are fair and binding? Haven't the parties agreed to implement the determinations made by the consultant?

Thankfully, the questioner immediately provided the answer. No, the administration of

construction contracts, in a large percentage of cases, does not conform to the letter or the spirit of the contract. Consultants are not seen, in many cases, as being impartial when the matter at hand is a variation to a contract caused by poorly coordinated construction drawings, and its client, the owner, is the party picking up the tab. Owners are not seen as processing regular progress payments in a timely manner, using every trick in the book to avoid paying for work done and equipment procured on its behalf. General contractors are no different, deciding which sub-trades to pay on time, and which to delay. And so it goes down the payment pyramid, each party holding back on payment to the next level.

The provincial and federal governments across Canada are now legislating, or at least considering, statutory prompt payment provisions for construction contracts. In addition, the availability of interim adjudication of construction disputes as the enforcement mechanism for prompt payments is coming into play. Most provinces have examined or enacted prompt payment and interim adjudication to some extent while updating their respective lien legislation.

Let's look at how it is being addressed across Canada.

As we have previously discussed (Digest Issues 14 and 15) prompt payment and interim adjudication were introduced in updates to the Ontario Construction Lien Act (now the Construction Act). Initial updates to the lien legislation were put into effect in July 2018. Since that time several revisions to the Act have been instituted by the provincial government to clarify issues regarding the transition period and other housekeeping matters. In October 2019 the prompt payment and interim adjudication regulations will come into effect, but only for projects where the procurement process started on or after October 1, 2019 (S87.3 (4) 2). Consequently, the implementation of prompt payment and interim adjudication will be rather slow. Of course, the dispute must be sufficiently valuable to warrant the expense of an adjudication process. It may be that the first adjudication will not be seen before the summer of 2020.

In Manitoba, two separate private members' bills were introduced (February 2018 and June 2019). Neither bill passed. The Manitoba Law Reform Commission, in a study of Manitoba's construction remedies legislation (The Builders' Liens Act: A modernised approach, November 2018), did recommend a system similar to the Ontario Construction Act. To date, no legislation has been passed in Manitoba.

Saskatchewan passed Bill 152, the Builders' Lien (Prompt Payment) Amendment Act, in May 2019, which provides for statutory prompt payment and available interim adjudication along the lines of the Ontario Construction Act. The regulations concerning the act have not yet been developed or agreed, but the government is planning for implementation in early 2020.

In Nova Scotia, amendments to the Builders' Lien Act were implemented though Bill 119, which received Royal Assent in April, 2019. Although seemingly based on the Ontario legislation, interim adjudication is available only for those issues subject to a notice of non-payment. It will be interesting to see if this restriction acts as a deterrent to the use of adjudication.

> **The Federal Prompt Payment for Construction Act...received Royal Assent on June 21, 2019.**

New Brunswick has reviewed its existing lien legislation and has published a Law Reform Note in May 2018 recommending the implementation of prompt payment regulation and adjudication. The note questions whether the full Ontario-based legislation is appropriate for a small province like New Brunswick.

Quebec has embarked on a pilot project to test various implementations of prompt payment, adjudication, and reporting measures.

Alberta has implemented specific language in its own contracts with construction service providers to invoke a prompt payment scheme but, has not addressed any adjudication provisions, nor extended these requirements to the wider construction industry.

In British Columbia a private member's bill was introduced in May 2019 to implement a prompt payment regime. However, the Bill did not provide for adjudication of payment disputes and is not expected to pass in the legislature.

Except for Ontario, the rules and regulations still need to be developed for all the legislation. There is a belief that those rules and regulations will fall in line with Ontario, providing some consistency across the country.

The relatively small scale of the construction industry in the smaller provinces, the lack of experienced industry professionals to act as adjudicators, the high likelihood of conflicts of interest, and a possible lack of specialised knowledge (such as northern climate construction) among the adjudicators is a common theme in commentary from the legal and construction communities. However, since most adjudications will take place in writing, by telephone or by video conference, the need for geographic proximity is not required. Recommendations include that the smaller provinces seek bi-provincial or national agreements to access a larger pool of qualified adjudicators.

On the national scene, the Federal Prompt Payment for Construction Act, designed to apply to all Federal construction projects, received Royal Assent on June 21, 2019. As is the case with most jurisdictions, the regulations have yet to be developed and agreed, and Cabinet has not yet set a date for this law to becomes effective.

In a curious departure from the Ontario transition provisions, the Federal legislation calls for a delay in implementing the Act of 12 months from the date of coming into effect. At that point, all ongoing contracts will be subject to the new prompt payment and adjudication legislation; there will be no gradual implementation. One hopes that the thousands of Change Orders to be issued across the country do not implement different provisions for ongoing contracts.

How do we prepare?

We have seen wide variations in the knowledge and understanding of the Construction Act in Ontario in our ongoing discussions with clients, and the construction community in general. Subcontractors are, at times, gleefully rubbing their hands at the prospect of being paid what they are owed within 35 days of submitting their invoice or are completely oblivious to the fact that the legislation has undergone such radical change. Many general contractors believe that life will go on as it always has. In their view, the size of the disputes related to prompt payment will not be large enough to justify a referral to interim binding adjudication until the end of the project, as is now the case with current lien legislation. They may very well be right.

In the meantime, the new legislation in Ontario and, by its seeming adoption across the country, in Canada is a disruptive event: an opportunity for the construction industry to streamline and modernise their internal processes. First and foremost, contractors and sub-contractors should update their invoicing and payment procedures to suit the new prompt payment timelines. Secondly, payors (owners and contractors) must streamline their invoice review processes to ensure non-payment notices are issued, whenever appropriate, in a timely manner. Thirdly, a general move to online invoicing and payment systems seems inevitable, to meet the very ambitious timeframes set out in the legislation.

In respect of interim adjudication, the need for improved record keeping cannot be understated. Contractors, or subcontractors, can assemble the documentation and prepare the referral documents to initiate an adjudication procedure at their convenience. A poorly documented notice of adjudication is destined to fail.

On the receiver's end, that a dispute has crystallised regarding payment or withholding of monies, etc., should never be in question. A well designed and executed record keeping system is the best defence. Once the referral documents are submitted the responding party must determine its response within days; usually no more than a week. There is no time to hunt through unorganised drawers. In adjudication, as in claims: "The party with the best documentation wins". ■

Insolvency: Cautious steps to save the supply chain

Careful and decisive operation of the contract's mechanisms to mitigate the effect of main contractor insolvency is essential when the early signs of crisis start to appear.

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Keystone Law

Recently the UK's oldest building contractor went under after more than 400 years' trading, becoming another casualty of the current cash flow slump in construction. Main contractor insolvency has a dramatic effect on project delivery and brings an abrupt halt to the flow of cash.

The financial position of suppliers and subcontractors inexorably becomes critical if the main contractor faces insolvency or termination. There is a risk of a "domino effect" of insolvencies throughout the supply chain.

The employer can consider taking measures that will help to avoid this and keep the project moving. These measures, which include direct payments to subcontractors, must be deployed with care because of the rules on corporate insolvency. After summarising those rules, this article looks at two situations: first, what happens when the contractor is insolvent, and secondly, the situation where that point has not been reached.

Effect of insolvency

When a company goes into liquidation, section 107 of the Insolvency Act 1986 governs the liquidator's duties on the distribution of the company's assets to unsecured creditors and shareholders:

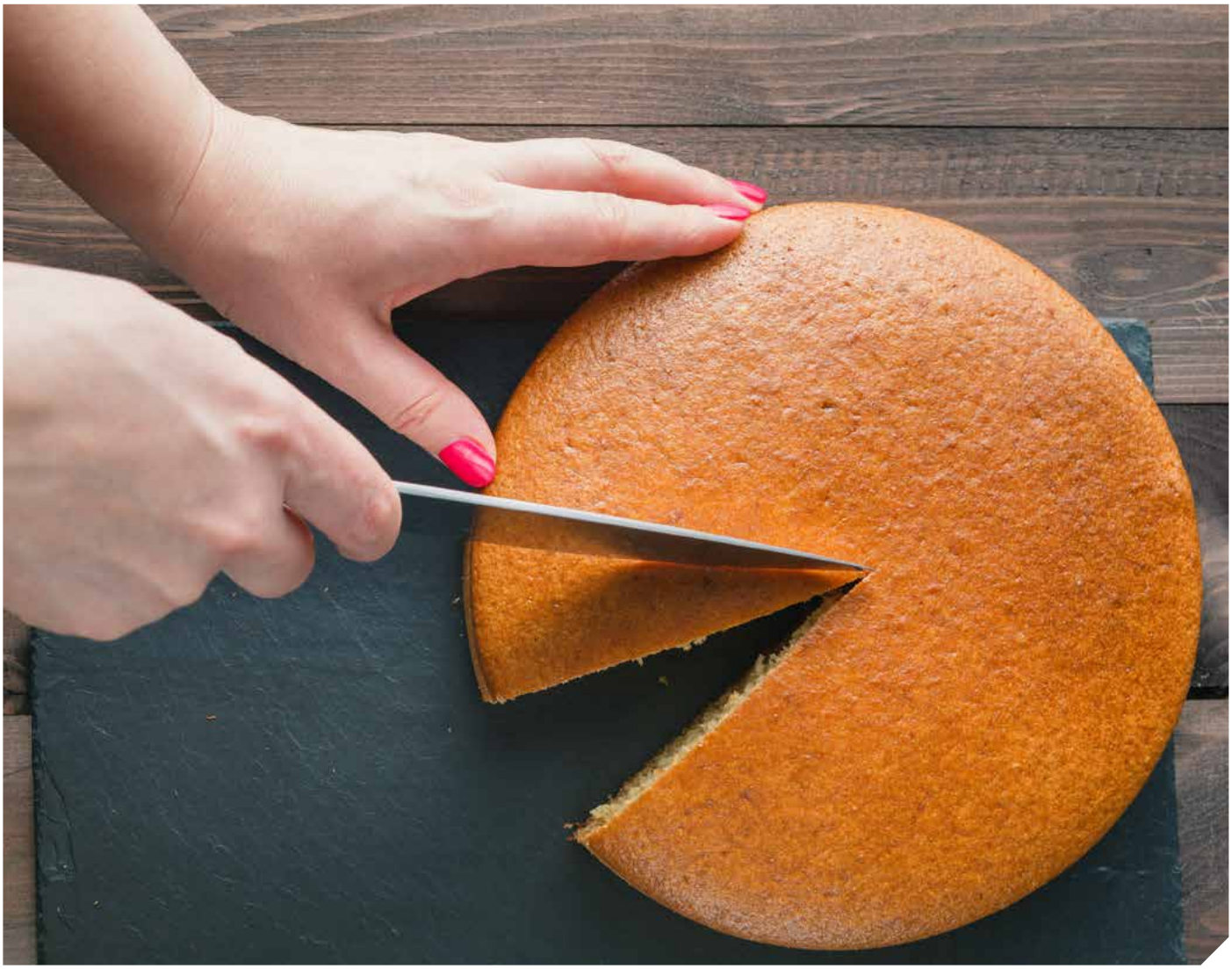
"The company's property...shall on the winding up be applied in satisfaction of the company's liabilities pari passu and subject to that application...be distributed among the members...".

The "company's property" includes all debts owed to the company, at the point when it becomes insolvent, such as amounts due under interim certificates. It would include any balance stated as due to the contractor under a construction contract. The "company's liabilities" covers all those amounts which the company is indebted to pay to unsecured creditors. That means all such creditors, comprising not just subcontractors on any one particular project but all subcontractors and suppliers on all its projects, as well as other general creditors such as utilities. The liquidator's duty is to collect all the company's assets, including all debts which can be settled or enforced, and to distribute this fund amongst all unsecured creditors equally. A distribution has to be in the proportion which their claim bears the total available fund.

In the case of British Eagle International Airlines v Cie Nationale Air France [1975] 1WLR 758, the House of Lords held that a company cannot "contract out" of the provision which is now section 107. An employer and a contractor cannot, for example, agree that on a termination sums which are due from the employer to the contractor at the point of the latter's insolvency will instead be paid to certain subcontractors to whom the contractor is indebted. That would result in certain creditors receiving more following an insolvency than if all assets had been distributed equally in proportion to their claims as required by the section. Those payments could be set aside by the contractor's liquidator. From his perspective, payments like these reduce the size of the fund available to be distributed amongst the company's creditors as a whole and the courts will make an order for the payment to be restored to the liquidator.

Note that this principle takes account of the "mutual dealings" provision in Rule 14.25 of the Insolvency Rules 2006 which allows debts owed to a debtor to be set off against amounts due to the company so that only the balance is payable to the liquidator. In a contractor's insolvency the employer is permitted to set off against the contractor's debt amounts owed to the employer.

Construction contracts (in general) require an employer to pay a contract sum to the contractor for the "works". Insofar as it has been certified and no set off is made against it, the contract sum is the employer's debt to the contractor. "Works" includes the work and materials supplied by subcontractors, and a



large component of the contract sum normally will relate to subcontract works. This part of the contract sum includes the contractor's debt to its subcontractors.

It may seem logical, particularly in urgent cases, for the employer to pay that debt or part of it directly to subcontractors. However such a direct payment will not discharge any part of the employer's debt to the contractor under the contract as (unless the contract is amended) the employer remains liable to pay to the contractor the whole of the contract sum.

Moreover section 107 and the British Eagle principle could later enable the contractor's liquidator to unwind any agreement between the contractor and the employer which permitted the employer to pay directly to subcontractors any part of amounts certified as due to the contractor. An express release of part of an employer's debt to a contractor to enable the employer to pay an equal amount directly to subcontractors would be vulnerable to attack if the contractor was later wound up.

However section 107 refers only to property vested in a company as at date of the insolvency. It does not deal with assets which cease to belong to the company before it became insolvent (although disposals of assets can be caught by the rules on preferences). An agreement can be made for future debts to the contractor to be paid to subcontractors if these arise during, but not at the start of, the insolvency. They would not come with section 107 because they were not the company's assets when it became insolvent. See, for example Golden Sands Marble Factory Limited v Easy Success Enterprises Limited. [1999] 2 HKC 356.

> **"The company's property… shall on the winding up be applied in satisfaction of the company's liabilities pari passu and subject to that application…be distributed among the members."**

Insolvent contractor

Standard contracts address the issue of insolvency, allowing the employer to terminate the employment of the contractor. On termination all further payments to the contractor, other than amounts already certified as due, will cease until the works are completed with defects rectified. Certificates issued but unpaid as at the date of insolvency will be debts forming part of the contractor's property for the purposes of section 107. After completion, a termination account is taken of what is due between the parties. The amount to date of all payments made to the contractor is added to the expenses incurred and the direct loss and damage caused to the employer arising as a result of the termination. In JCT contracts "expenses" expressly includes the cost of

The employment of unpaid subcontractors will either terminate automatically or be terminated by the subcontractor itself when the payment stream stops.

paying "other persons to carry out and complete the works." That sum is then set against the total amount which would have been paid to the contractor if it had completed the works.

The resulting balance is then certified as a sum due from the contractor to the employer or vice versa which will reflect the additional costs to the employer of the termination. The termination account reflects "mutual dealings" between the contractor and the employer for the purposes of Rule 14.25 of Insolvency Rules so that the amount paid by or proved in liquidation by the employer would be limited to that balance. See Michael J Lonsdale (Electrical) Ltd v Bresco Electrical Services Ltd (In liquidation). [2018] EWHC 2043 TCC.

The employment of unpaid subcontractors will either terminate automatically or be terminated by the subcontractor itself when the payment stream stops. Forms of subcontract currently in use differ on the extent of the subcontractor's entitlement if the subcontract is terminated. However as unsecured creditors proving in the contractor's liquidation, their recovery, if any, would be meagre.

The employer has a duty to mitigate its loss, so the works must be completed in the most economical way. The obvious and convenient option for the employer is to re-engage existing subcontractors as "other persons". The decision to do this must be taken without delay. The cost involved will almost invariably include unpaid amounts falling due to subcontractors before the contractor's insolvency. If these were included in payments certified as due to the contractor before the termination, and are still debts, they will be part of the contractor's assets at the time of the insolvency. If so, the employer cannot pay the relevant amounts to unpaid subcontractors instead. Nevertheless, if the employer makes payments to subcontractors as a cost of completing the works, it can set off these costs in the termination account when the works are completed.

Work and materials uncertified as at the date of insolvency will remain so until any part of their value is certified following the termination account on completion. Completed but uncertified subcontract work can be paid directly to subcontractors, and all of these costs again form part of the cost of completing the works by "other persons" and addressed within the termination account.

Non-insolvent Main Contractor

There are particular risks in making direct payments to subcontractors if the contractor has not gone into liquidation at the time of termination. If those payments are made without any agreement it is likely that they will relate to amounts certified to the contractor and therefore will have become assets belonging to it at the point of insolvency.

In many cases employers do not wait for the contractor actually to become insolvent. Where there are signs of financial difficulty, such as persistent late payment of subcontractors, an employer may choose proactively to step in. In contrast with insolvency, this situation is rarely covered with any clarity by the contract. The mere fact that the contractor is demonstrably in financial distress is not a legitimate basis for termination, which could be a costly risk: an employer who gets a termination wrong can face a claim in damages for repudiation.

Any termination must therefore be by agreement and would need to be commercially attractive to a financially challenged contractor. The agreement is made outside the contract but of necessity amends and replaces some of its terms. Its object, in addition to bringing the contractor's employment to an end, is to exclude future claims. It will include a payment to the contractor as compensation for the termination and which would be a cap on the employer's further liability. The termination agreement establishes the amount of the employer's debt to the contractor before any insolvency occurs.

In contrast with the insolvency situation, the financial settlement under the termination agreement is achieved at the time of termination, not at completion when all costs have been ascertained. Therefore agreed estimates have to be used to calculate the settlement amount.

Main contractor termination will leave subcontractors and suppliers exposed. Their position will depend upon how the relevant subcontract is worded. For example standard JCT building subcontracts provide for the immediate termination of the subcontractor's employment if the contractor's employment under the main contract is terminated. But many main contractors prefer to use their own subcontract conditions.

Although by no means all contractors' standard subcontracts provide for immediate termination in such a case, the end of the subcontractor's employment would inevitably follow swiftly. As a last resort, the subcontractor would suspend and then terminate its own employment on the grounds of non-payment. Subcontractors whose contracts do not provide for immediate termination should plan their strategy carefully to avoid damages claims from the main contractor.

Payment is a main focus for subcontractors when the main contract is terminated. Initially the payment stream stops. Subcontractors may then be entitled to payment for the outstanding value of subcontract work carried out (including any additional cost) and materials provided up to the termination date. Entitlement will also include the subcontractor's costs of removing plant, tools and equipment from the site. In addition, direct loss and/or damage caused to the subcontractor by the termination may be expressly covered. In practice subcontractors have little prospect of getting paid unless they press claims. The risks of becoming an unsecured creditor in the contractor's future insolvency are high.

In common with both insolvent termination and with voluntary termination (i.e. with a termination agreement), maintaining continuity of production remains critical for the employer. It will be important for it to work rapidly to re-engage existing subcontractors with minimal disruption. But if the issue of overdue subcontractor payments is not addressed early enough, subcontractors will make alternative plans: faced with the risk of no further payments, they will bring their exposure to the project to an end as quickly as possible.

For the employer to secure continuity of subcontract work without interruption, subcontractors need to be approached as soon as possible and before any termination is effective. If re-engaged, the new subcontract terms would be very similar, but with changes. New pricing must be agreed taking account of amounts unpaid by the contractor, to enable subcontract work to continue as seamlessly as possible. The potential difficulty is that if and when the contractor does subsequently go in to liquidation, the employer may in effect pay twice for the same work.

If an employer has to make payments directly to subcontractors to secure continuity, the termination agreement must cover the subcontractor payments to be taken into account in the termination payment to the contractor. Changes to the main contract will need to be made so that the employer's liability to the contractor for the value of the subcontract works is reduced and capped.

Insolvent or voluntary termination?

With less opportunity to maintain continuity and with the risk of lengthy delays, employers will want to avoid insolvent termination if at all possible. At that point at least some of the contract sum may have become unavailable to be paid to re-engaged subcontractors.

If a termination agreement is used it has to be carefully planned and drafted, so that there is no or only a limited liability to the contractor under or arising out of the contract after a termination payment is made. Importantly the agreement should present in the calculation of the termination payment a clear commercial rationale for that payment and for the allocation of funds to facilitate continuity of progress. ■

Evaluating Contract Claims (Third Edition)

by John Mullen and Peter Davison

John Mullen
Principal and Quantum Expert
Diales

Our third edition of *Evaluating Contract Claims* is finally being published in September. This is a substantial re-write of the previous edition and is expanded to nearly 700 pages of original text. A number of new and unusual heads of claim are considered, whilst approaches to quantification of the more common heads are considered in greater detail than before.

This new edition takes a much more international perspective to claim quantification. FIDIC Red Book terms are used as examples of provisions commonly encountered internationally. The increasing use of NEC forms, both in the UK and internationally, is reflected by analysis of the claims provisions of NEC4-ECC as examples of a more proactive and prospective approach. For the UK market, SBC/Q and the Infrastructure Conditions terms are considered.

Our experience is that "one size does not fit all" when quantifying many heads of claim. Variables such as the express terms of the contract, the applicable law, the underlying facts, the available records and proportionality are therefore discussed. We then set out the potential alternative quantification methods for different heads of claim, particularly of problematical heads such as disruption and head office overheads and profit.

New heads of claim analysed include those in relation to bonds, preliminaries thickening, cumulative impact and post-handover costs. The often overlooked area of duplications between claims is also covered with suggestions on how to address overlaps.

Substantially expanded sections include those on acceleration, termination (which now has its own chapter), the valuation of omissions and the valuation of defective works. The second edition's lengthy discussion of global claims is further expanded, now with consideration of related terms such as 'total loss' and 'total cost'.

This new edition also brings up to date consideration of relevant judgments of the UK commercial courts since the second edition, such as those in Lilly v Mackay, Liverpool Museums, Healthy Buildings, MT Hojgaard and Cavendish v Makdessi.

For those wishing to prevent rather than cure, the book explains how change (planned or unplanned) gives rise to claims, and how claims can lead to disputes. Common pitfalls are identified in preparing contract documents, administering contracts, preparing claims and responding to them. Advice is given on how to prevent claims arising in the first place or evolving into disputes if they cannot be avoided. ■

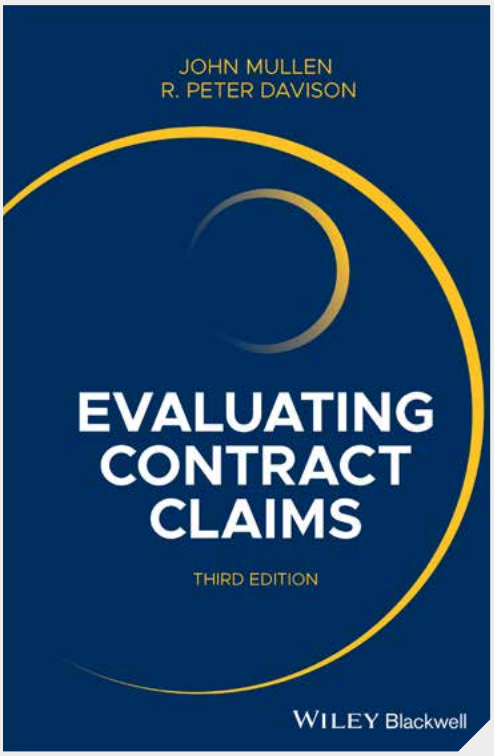
I have now had the opportunity to read through the third edition of the book. The previous editions have helped numerous construction professionals to apply a consistent approach to valuing claims based on good practice and founded on sound legal principles.

The third edition includes many necessary updates to deal with new standard forms, recent court decisions in the UK and overseas, the changes to the SCL Protocol, changes to the Rules of Measurement and the introduction of International Construction Measurement Standards. Above all, the third edition has now taken on an increased international tone. As the authors explain, in many international arbitrations the expert evidence on claims is given by experts from the UK. This is for a number of reasons: the fact that engineers and quantity surveyors, as well as other consultants often come from the UK; the widespread use of the English language in international construction and the application of English law or other laws developed from English common law. However, it also reflects the fact that English construction law is more mature in tackling the issues which arise in evaluating construction claims on complex projects.

The book includes detailed assistance in evaluation of every type of claim which practitioners will encounter. These vary from evaluating direct or time consequences of claims to evaluating termination claims or post completion claims. The third edition also refers to claims arising from calls on bonds. No matter what type of claim, whether straightforward valuations of variations or problems of complex delay and disruption claims, the third edition of the book contains a comprehensive guide to the current state of knowledge and experience in evaluating those claims.

Whilst the previous editions were more focussed on the UK domestic market, they were used overseas by practitioners who needed to have access to specialist knowledge on evaluation of claims. This has necessarily led the authors to provide more assistance to those dealing with claims overseas. The third edition should therefore find a place, worldwide, on the shelves of all those involved in evaluating claims whether construction professional or construction law practitioners. John Mullen and Peter Davison are to be commended for providing such a practical and informative book which will assist in claims being properly formulated and established under construction contracts.

Sir Vivian Ramsey QC
July 2019



BYTE

WHAT CAN INDUSTRY LEARN FROM SPORT?

In this series of posts Driver Trett celebrate some of the great sporting events going on at this time of year by taking a moment to look at what business in general, and in particular the construction industry, can learn from the world of sport.

Tennis is one of the world's most competitive sports. In order to reach the top of this profession, professional players will focus on both their physical, mental, and emotional attributes. Scan the QR code to read what we think industry could learn from tennis.

The pinnacle of the world of motor racing is widely accepted as Formula 1. To succeed in this sport requires a team to operate at the peak of technical efficiency. Scan the QR code to read what we think industry could learn from Formula 1.

Marathon running is one of the biggest challenges in terms of physical endurance. Scan the QR code to read what we think industry could learn from marathon runners.

Professional riders are now among the world's fittest elite athletes. Every aspect of their training, nutrition physical and mental wellbeing is measured, assessed and attempts made to improve upon last year's version of perfection. Scan the QR code to read what we think industry could learn from cycling.

Football is arguably the most popular game in the world. Although the individual must be their best, football is 100% a team sport. Scan the QR code to read what we think industry could learn from football.

In this final post in our series, we look at one of the most difficult roles in any sport played anywhere. The role of referee or umpire is always a challenging one. Has the introduction of VAR made it any easier for football referees? Scan the QR code to read what we think industry could learn from referees.

BYTE

WHAT CAN THE ONTARIO CONSTRUCTION INDUSTRY LEARN FROM ADJUDICATION IN THE UK?

Nicola Huxtable, Operations Director, Driver Trett UK explains some of the lessons learned from over 20 years of adjudication in the UK.

To read the BYTE you can visit https://www.driver-group.com/europe/news/what-can-the-ontario-construction-industry-learn-from-adjudication-in-the-uk or scan the QR code with your smartphone camera.

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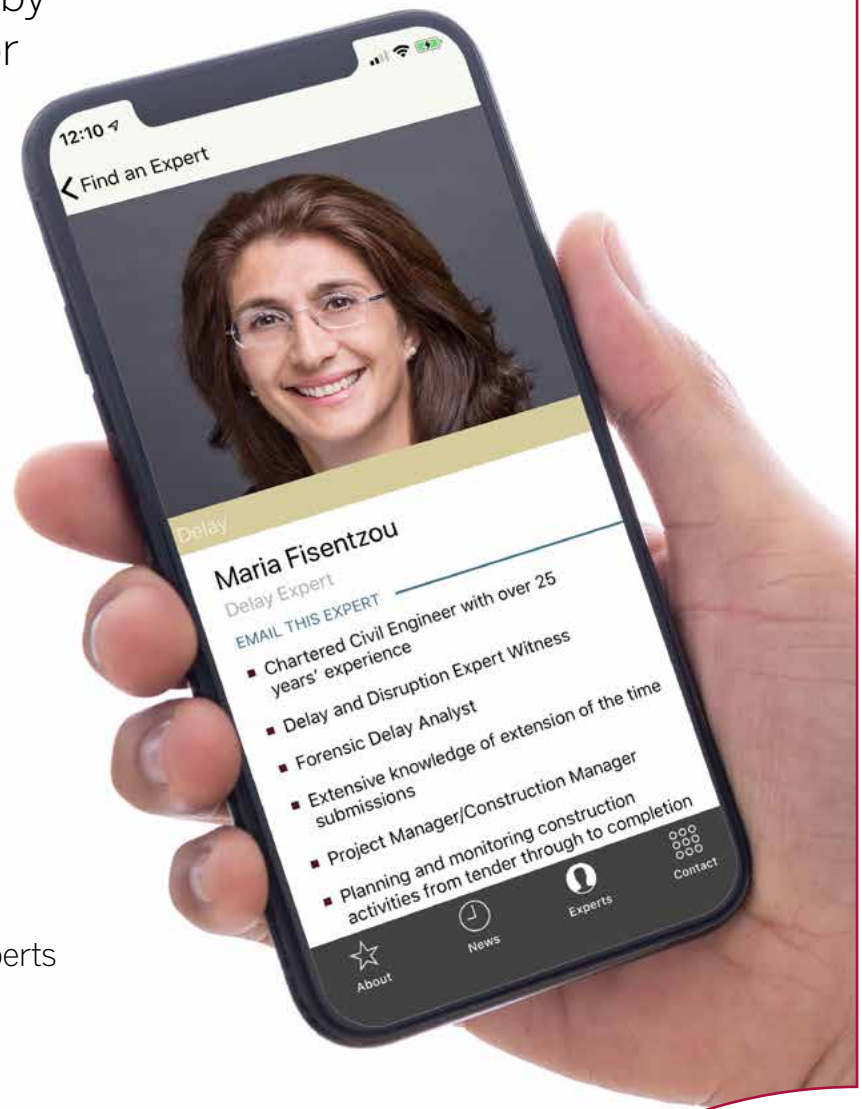

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